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Congenital Heart Disease

THE RELATIONSHIP BETWEEN HEMOCONCENTRATION AND HYPONATREMIA ON CLINICAL OUTCOMES IN PATIENTS WITH ACUTE DECOMPENSATED HEART FAILURE: DATA FROM THE KOREAN HEART FAILURE (KORHF) REGISTRY

Poster Contributions
Hall C
Sunday, March 30, 2014, 9:45 a.m.-10:30 a.m.

Session Title: Heart Failure and Cardiomyopathies: Challenge of Acute Decompensated Heart Failure
Abstract Category: 12. Heart Failure and Cardiomyopathies: Clinical
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Background: Hemoconcentration (HCT) and hyponatremia were known to be related with mortality and morbidity in patients (pts) with acute decompensated heart failure (ADHF), respectively. However, the relationship between HCT and hyponatremia in the prediction of clinical outcomes in ADHF remains unknown until now.

Methods: We analyzed 2,046 ADHF pts (1,025 males, 68 ± 14 years old, 38.3% ischemic origin, left ventricular ejection fraction 39.0 ± 15.8%) from Korean Heart Failure (KorHF) Registry. We defined HCT as an increased hemoglobin level between admission and discharge and hyponatremia as sodium < 135 mmol/L at admission.

Results: Cardiovascular (CV) event was a composite clinical endpoint of all-cause mortality and HF rehospitalization. During follow-up period (median 371, IQR 85-872 days), CV events occurred in 796 ADHF pts (38.9%) including 382 (18.7%) all-cause mortality. HCT was presented in 889 ADHF patients (43.5%) and hyponatremia was observed in 25.3% (n=517). The Kaplan-Meier analysis showed that HCT was related with lower CV events (35.0% vs 41.9%, log-rank p<0.001) and hyponatremia was related with higher CV events (45.1% vs 36.8%, log-rank p<0.001) in overall ADHF pts. Hyponatremia was associated with higher CV events both in HCT (43.0% vs 32.7%, log-rank p<0.001), and in non-HCT (46.4% vs 40.2%, log-rank p=0.009) group. However, HCT was associated with lower CV events only in non-hyponatremia (32.7% vs 40.2%, log-rank p<0.001), not in hyponatremia (43.0% vs 46.4%, log-rank p=0.384) group.

Conclusions: Our study demonstrated that the association between HCT and better prognosis was disappeared in ADHF pts with hyponatremia. Therefore, this unanticipated relationship between HCT and hyponatremia may provide a new insight in the treatment strategy of ADHF.